SODIUM ACETATE

<table>
<tr><td>Trade Name</td><td>Sodium Acetate (BIOMED)</td></tr>
<tr><td>Class</td><td>Electrolyte</td></tr>
<tr><td>Mechanism of Action</td><td>Sodium acetate is an alkalinising agent. It is converted to sodium bicarbonate following metabolism by the liver.</td></tr>
<tr><td>Indications</td><td>Non-acute management of metabolic acidosis
- Primarily for extremely preterm infants via UAC or as an additional infusion if the UAC is unavailable/not preferred</td></tr>
<tr><td>Contraindications</td><td>Hypernatraemia, fluid overload
Use with caution in patients with renal impairment (monitor sodium).</td></tr>
<tr><td>Supplied As</td><td>Clear solution in 20 mL glass ampoule - 4mmol/mL</td></tr>
<tr><td>Dilution</td><td>
<u>WEIGHT ≤ 1kg</u>
<table>
<tr><th>Sodium Acetate 4mmol/mL</th><th>Water for Injection</th><th>Final Volume</th><th>Final Concentration</th></tr>
<tr><td>1 mL
(=4 mmol)</td><td>49 mL</td><td>50 mL</td><td>0.08 mmol/mL</td></tr>
</table>
<u>WEIGHT >1kg</u>
<table>
<tr><th>Sodium Acetate 4mmol/mL</th><th>Water for Injection</th><th>Final Volume</th><th>Final Concentration</th></tr>
<tr><td>2 mL
(=8 mmol)</td><td>48 mL</td><td>50 mL</td><td>0.16 mmol/mL</td></tr>
</table>
<u>High Strength (must be given via central line)</u>
In individual circumstances a higher strength solution may be required if fluid restriction is a priority. Calculation of the mmol/kg/day and mL/hr will be needed to ensure correct dosing
<table>
<tr><th>Sodium Acetate 4mmol/mL</th><th>Water for Injection</th><th>Final Volume</th><th>Final Concentration</th></tr>
<tr><td>6.25 mL
(=25 mmol)</td><td>43.75 mL</td><td>50 mL</td><td>0.5 mmol/mL</td></tr>
</table>
</td></tr>
<tr><td>Dosage</td><td>1 – 3 mmol /kg /day but higher doses may be needed as per SMO

UAC - Start at 0.5mL/hr to mimic usual rates for line patency and alter as required to a maximum of 1mL/hr via UAC. The pump will calculate the mmol/kg/hr dosing and dose limits have been set in the pump guardrails. See infusion sheet

IV -Dose as required in mmol/kg/day with varying mL/hr rates. Prescribe on the Level 3 sheet and not the infusion sheet</td></tr>
</table>

Examples of dosing for different mL/hr rates:

0.08 mmol/mL concentration	0.5mL/hr	0.75mL/hr	1mL/hr
500g	1.9 mmol/kg/day	2.8 mmol/kg/day	3.8 mmol/kg/day
750g	1.2 mmol/kg/day	1.9 mmol/kg/day	2.5 mmol/kg/day
1000g	1 mmol/kg/day	1.4 mmol/kg/day	1.9 mmol/kg/day

0.16 mmol/mL concentration	0.5mL/hr	0.75 mL/hr	1mL/hr
1000g	1.9 mmol/kg/day	2.8 mmol/kg/day	3.8 mmol/kg/day
2000g	1 mmol/kg/day	1.4 mmol/kg/day	1.9 mmol/kg/day
3000g	0.6 mmol/kg/day	1 mmol/kg/day	1.3 mmol/kg/day

Guardrails

Conc: Min – 0.08 mmol/mL Max – 0.5 mmol/mL

Soft Min: 0.02 mmol/kg/hr Hard Max: 0.25 mmol/kg/hr

Soft Max: 0.12 mmol/kg/hr Default: 0.04 mmol/kg/hr

Interval

Continuous infusion 0.5 - 1mL/hr.

If infused at higher than 1mL/hr calculate the amount of sodium acetate in mmol/kg/day to ensure the dose is not too high

Administration

IV: The concentrations of the solutions above have been chosen as they have similar osmolality to sodium chloride 0.45% and 0.9%

Sodium acetate solution for injection MUST be diluted prior to administration

Add heparin to the infusion if going via a central or arterial line

Compatible With

Solutions: Glucose 5%, sodium chloride 0.9%, amino acid solutions, lipid emulsion

Y site: aciclovir, adrenaline, alfentanil, allopurinol, amifostine, amikacin, aminophylline, ampicillin, anidulafungin, asparaginase, atenolol, atracurium, azithromycin, aztreonam, calcium folinate, calcium gluconate, capreomycin, cefazolin, cefepime, cefotaxime, cefotetan, cefoxitin, ceftazidime, ceftriaxone, cefuroxime, clindamycin, dexamethasone, dexmedetomidine, digoxin, diltiazem, diphenhydramine, dobutamine, dopamine, doxycycline, enalaprilat, ephedrine, erythromycin, esmolol, famotidine, fentanyl, fluconazole, fluorouracil, foscarnet, fosphenytoin, furosemide, ganciclovir, gentamicin, heparin, hydrocortisone, imipenem-cilastin, labetalol, levofloxacin, lidocaine, linezolid, lorazepam, magnesium sulfate, methylprednisolone, metronidazole, milrinone, morphine, naloxone,

	netilmicin, nitroprusside sodium, octreotide, ondansetron, pamidronate, pancuronium, pentobarbital, phenobarbital, phenylephrine, piperacillin-tazobactam, potassium chloride, propranolol, ranitidine, remifentanil, rocuronium, sodium bicarbonate, suxamethonium, sulfamethoxazole-trimethoprim, tacrolimus, theophylline, ticarcillin, tobramycin, vancomycin, vasopressin, vecuronium, verapamil, voriconazole, zidovudine.
Incompatible With	Amiodarone, amphotericin B, caspofungin, ciprofloxacin, diazepam, hydralazine, mycophenolate mofetil, phenytoin.
Interactions	Sodium acetate may increase the renal excretion of flecainide
Monitoring	Electrolytes, acid/base status (bicarbonate, base excess, pCO_2).
Stability	Ampoule is single use only – discard any remaining contents immediately after use. Replace syringe every 24 hours.
Storage	Store unopened vials at room temperature, manufacturer's expiry.
Adverse Reactions	Phlebitis Electrolye disturbance- hypernataemia, hypervolaemia, hypocalcaemia, hypokalaemia, metabolic alkalosis, water intoxication Abdominal distension and flatulence Pulmonary oedema
Metabolism	Converted by the liver into bicarbonate
Comments	Sodium acetate may be preferred over sodium bicarbonate for management of neonatal metabolic acidosis for non-acute management
References	1. Uptodate -https://www.uptodate.com/ 2. Australasian Neonatal Medicines Formulary (ANMF). (22 March 2022). Sodium Acetate. Version number 3.0 Date of publication 05/02/2026 (year) Retrieved on 11/02/2026 from https://www.anmfonline.org/ 3. Micromedex® (electronic version). Merative, Ann Arbor, Michigan, USA. Available at: https://www.micromedexsolutions.com/ (cited: 5/02/2026).
Updated By	A Lynn B Robertshawe March 2026